

REMARKS

Applicants reply to the Office Action dated March 13, 2009, within the shortened three month statutory period for reply. Claims 1-14 were pending in the application and the Examiner rejects claims 1-14. Support for the amendments may be found in the originally-filed specification, claims, and figures. No new matter has been introduced by the amendments. Reconsideration of this application is respectfully requested.

Examiner Interviews

Applicants thank the Examiner for the Examiner Interviews on June 1, 2009 and June 5, 2009. The Examiner suggested that Applicants amend the claims to further describe the unique functions performed by the metadata. As suggested by the Examiner, Applicants further amend the claims to further describe how the metadata provides numerous distinct novel instructions and functionality, namely, metadata comprising (i) instructions for where to access travel transaction data, (ii) instructions for where to access financial account data, (iii) instructions for how to access the travel transaction data, (iv) instructions for how to access the financial account data, (v) instructions for retrieving travel transaction data, (vi) instructions for retrieving financial account data, (vii) protocols that are used to access the travel transaction data, (viii) protocols that are used to access the financial account data, (ix) a location identifier corresponding to a plurality of disparate travel sources, (x) protocol instructions for the plurality of disparate travel sources, (xi) a location identifier corresponding to a plurality of disparate financial sources, (xii) protocol instructions for the plurality of disparate financial sources, and (xiii) a defined relationship between attributes and metrics of the natural language query and target data sources.

Rejections Under 35 U.S.C. § 101

The Examiner rejects claims 11-12, along with 1-10 and 13-14 under 35 U.S.C. § 101 as being directed toward non-statutory subject matter. The Examiner asserts that, the rejected claims “are not tied to a particular machine or apparatus nor do they transform a particular article into a different state or thing” (page 5, item 9). Applicants appreciate the Examiner’s suggestions regarding amendments that would comply with 35 U.S.C. § 101. Applicants amend claims 11 and 12 in accordance with the suggestions of the Examiner in order to recite tangible elements relating to a computer system processor. Applicants also amend independent claim 1 to recite a particular machine (“transaction processor”) in each step, along with other transformation elements. Applicants also amend independent claim 6 to recite particular

machines (“computerized input device” and “host processor”), along with other transformation elements. The dependent claims are cured by the amendments to the independent claims which cure the 101 issues.

Rejections Under 35 U.S.C. § 103

The Examiner rejects claims 1-3, 6-8, and 11-12 under 35 U.S.C. § 103(a) as being unpatentable over Shoolery et al., U.S. Patent No. 5,570,283, (“Shoolery”) in view of Buchanan, U.S. Patent No. 6,009,408 (“Buchanan”) and in further view of Wu et al., U.S. Patent No. 6,959,339 (“Wu”). Applicants respectfully traverse this rejection.

Shoolery generally discloses a system for aggregating travel transaction data from Customer Reservations System (CRS) systems in order to provide corporate leaders with a more rapid insight into travel expenses for an organization. As disclosed in the Background of Shoolery, CRS systems do not maintain travel information for more than 24 hours due to the fact that current CRS systems are old and lack the memory and processing power to maintain such information for longer periods of time. As such, Shoolery correctly notes that “information about travelers’ itineraries virtually disappears until post travel credit card invoices are processed” (column 2, lines 46-48). Shoolery goes on to state that this can take as long as three months, therefore, managers are at a disadvantage in timely identifying out-of-policy travel that employees may have made.

Shoolery seeks to overcome the disadvantages of prior art travel reporting by connecting to various CRS systems on a regular basis and downloading travel information, including travel cost data, relating to their employees. The Shoolery system is able to process this information to produce an expense report that can be electronically routed to the traveling employee. The employee can then add other expenses such as, for example, taxi fares, dining expenses, entertainment expenses, etc. The expense report is then routed to the appropriate manager for review and approval. Once approved, Shoolery discloses that the expense report can be used to reconcile receipts, ATM withdrawals, per diem, etc.

Buchanan generally discloses a system for processing travel related expenses. Specifically, the Buchanan system includes a database that stores a traveler profile, a customer profile, and a traveler category rule set in order to provide automated services for travel expense reporting and for processing of travel expenses. The Buchanan system uses the traveler profile in order to allocate funds for travel expenses. For example, a profile may correspond to a high-level executive of a large corporation. When the executive makes travel arrangements, the

Buchanan system performs an analysis of the executive's profile, determines that first-class airfare is required and determines that client entertainment expenses can be expected to average \$280 per day of travel. Therefore, the Buchanan system is limited to calculating the overall expenses relating to the travel and allocates funds to the Executive based on the calculation.

Moreover, Buchanan receives electronic representations of receipts directly from service providers; therefore, **there is no need for the traveler to maintain hard copy receipts during business related travel.** However, Buchanan only discloses that these receipts are "images", and does not further disclose how the receipts are automatically processed. **In other words, Buchanan does not disclose or contemplate a procedure for automatically identifying the service providers, accessing their database systems, and retrieving the receipts.**

Wu generally discloses a system for managing image data, such that images can be searched and retrieved from a database based on metadata associated with the image. More specifically, the Wu system provides a digital library that can be implemented within an IBM database that allows images of varying formats to be converted to a format that is suitable for a requesting client computer. Wu is directed toward a problem that existed in the infancy of the Internet. Images, at that time, were formatted in accordance with the standards of various Internet browser applications and various operating systems. For example, an image that was formatted to be viewed within Internet Explorer on a Microsoft Windows platform would not be viewable within an Internet browser application on an Apple Macintosh operating system. The problem has since been resolved with the standardization of image file types (e.g., .JPEG, .PNG, .GIF, etc) that are readable by most, if not all, commercially available Internet browsers.

The Examiner asserts that it would have been obvious "to add to the financial account retrieval and formatting functions of Buchanan and the natural language query processing of Wu to the teachings of Shoolery" (page 9, paragraph 3). **However, importantly, Applicants note that the presently claimed invention does not merely modify a file format, but instead, modifies the format of the data.** For example, there are currently many applications that are capable of modifying a .jpeg file to a .gif file, as is taught by Wu. However, contrary to such applications, including Wu, the presently claimed invention retrieves data from disparate sources (including both travel cost data and financial charge data), converts the two different data types to a single data type, and combines the two data types into a single report. Wu simply converts a first file type into a second file type.

Neither Shoolery, Buchanan, nor Wu are concerned with the specific problem of providing highly scalable, conditioned and inter-related transactional data from multiple, disparate data sources including BOTH travel cost data from travel sources AND financial charge data from financial account sources. Moreover, neither Shoolery nor Buchanan disclose how data may be obtained from multiple disparate sources based on a single natural language query.

Applicants further contest the Examiner's assertion that it would have been obvious to combine Wu with Shoolery and Buchanan to create the presently claimed invention where travel cost data from travel sources and financial charge data from financial account sources are retrieved from disparate sources and then conditioned in order to produce the claimed travel expense report. **Applicants respectfully request the Examiner to provide disclosure that more closely links the inventions, such that it would have been obvious to combine the references.**

Moreover, while known systems, including the cited references, may allow for the construction and processing of natural language queries, such systems only process parameters defined within the natural language query in order create a single query to be executed against a single database. While such a query may be operative to retrieve data from multiple tables within the single database, the process lacks the ability to construct multiple queries that may be executed against multiple and disparate database systems based on metadata that is directly associated with parameters within a single natural language query. This is contrary to the presently claimed invention, which takes into consideration that elements of a natural language query may relate to multiple and disparate servers and database systems. Therefore, **the presently claimed invention equips each query element with a set of instructions (i.e., metadata), which instruct the system as to where to access the requested data, as well as specific protocols that may be required in order to access the data.** Neither of the cited references disclose a system capable of parsing a single natural language query in order to seamlessly access data within any number of servers and database systems. As such, neither Shoolery, Buchanan, Wu, nor any combination thereof, disclose or contemplate the following combination of unique steps and use of metadata, as similarly recited by independent claims 1, 6, 11, and 12:

metadata comprising (i) instructions for where to access travel transaction data, (ii) instructions for where to access financial account data, (iii) instructions for how to access the travel transaction data, (iv) instructions for how to access the financial account data,

(v) instructions for retrieving travel transaction data, (vi) instructions for retrieving financial account data, (vii) protocols that are used to access the travel transaction data, (viii) protocols that are used to access the financial account data, (ix) a location identifier corresponding to a plurality of disparate travel sources, (x) protocol instructions for the plurality of disparate travel sources, (xi) a location identifier corresponding to a plurality of disparate financial sources, (xii) protocol instructions for the plurality of disparate financial sources, and (xiii) a defined relationship between attributes and metrics of the natural language query and target data sources;

formatting, by the transaction processor, the data selection criteria **in accordance with the metadata**;

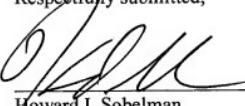
Dependent claims 2-5, 7-10, and 14 variously depend from independent claims 1 and 6. As such, dependent claims 2-5, 7-10, and 14 are allowable for at least the reasons set forth above, as well as in view of their own respective features.

The Examiner next rejects claim 13 under 35 USC 103(a) as being unpatentable over Shoology in view of Buchanan and Wu and further in view of Official Notice. Applicants traverse the official notice taken by the Examiner because “the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known.” MPEP 2144.03. Applicants therefore respectfully request that “the examiner provide documentary evidence in the next Office action if the rejection is to be maintained.” Id.

In view of the above remarks and amendments, Applicants respectfully submit that all pending claims properly set forth that which Applicants regard as their invention and are allowable over the cited references. Accordingly, Applicants respectfully request allowance of the pending claims. The Examiner is invited to telephone the undersigned at the Examiner’s convenience, if that would help further prosecution of the subject application. The Commissioner is authorized to charge any fees due to Deposit Account No. 19-2814.

Respectfully submitted,

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